

**Ex.NO: 4**

**CONTOURING – DIRECT / GRID METHOD-PLOTTING OF  
CONTOUR - PREPARATION OF MAP - COMPUTATION  
OF VOLUME**

**DATE:**

**OBJECTIVE:**

To prepare a contour map by Block Contour method.

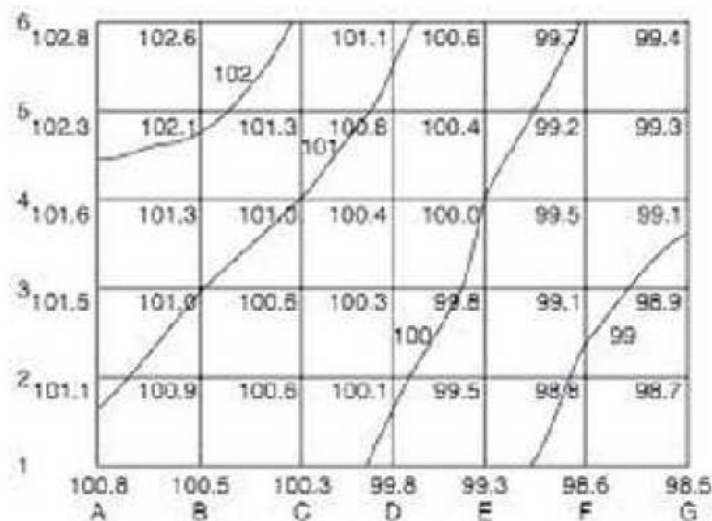
**INSTRUMENTS USED:**

1. Dumpy level
2. Leveling staff
3. Chain
4. Ranging rods
5. Arrows
6. Measuring tape

**PROCEDURE:**

1. The site for block contour is selected by through study.
2. The dimensions of block contour are of size 50×50 m.
3. Then the area is divided into blocks of size 10×10 m by using cross staff, chain and ranging rod.
4. The instrument is placed where maximum reading can be taken in the intersection points.
5. After taking the readings the RL's of each point is calculate by height of collimation method or by rise and fall method. All the reduced levels are plotted in A<sub>2</sub> sheet.
6. The points having same RL's connected and finally we observe a contour map. The contour of desired values is interpolated.

**FIGURE:**



**TABULATION:**

S.NO.	BACK SIGHT	INST SIGHT	FORE SIGHT	HOC	RL	DISTANCE	REMARK
1							
2							
3							
4							
5							

**CHECK:**

1.  $\sum BS - \sum FS =$

2. First RL – Last RL =

**RESULT:**

The block of size 50×50 m was drawn and reduced level of each intersection was entered smooth curve of various contour lines were drawn connecting points of equal elevation and the contour map was prepared.

## **RADIAL CONTOURING**

### **OBJECTIVE:**

To prepare a contour map by Radial Contour method.

### **INSTRUMENTS USED:**

1. Dumpy level
2. Leveling staff
3. Chain
4. Ranging rods
5. Arrows
6. Measuring tape

### **PROCEDURE:**

1. After selecting the site the instrument is setup at station points 'o' and temporary adjustments are done.
2. The north of site is focused and different intervals maximum 10 readings are taken at first line.
3. Then the instrument is swinger right and horizontal angle  $30^0$  is set and staff readings are taken in the line.
4. Similar procedure ids done for every  $30^0$  interval in horizontal angle. The readings taken are entered in the field book and calculations are made to know the distance, RL etc.
5. The radial lines and the position of the points on each line are plotted the desired scale and their spot levels are entered.
6. Interpolation of required contour is done with respect to spot levels.

### **FIGURE:**

**TABULATION:**

STAFF AT	AZIMUTH			STADIA READING		STADIA INTERCEPT	AXIAL READING	HORIZONTAL READING	RL
A1	0 <sup>0</sup>	00'	00''						
A2									
A3									
A4									
A5									
A6									
B1	30 <sup>0</sup>	00'	00''						
B2									
B3									
B4									
B5									
B6									

**RESULT:**

Thus the staff readings and reduced level of the intermediate points are calculated and tabulated. The radial lines were chosen with an angular spacing of 30<sup>0</sup> and 7 such lines were selected. Starting from 0-360<sup>0</sup> smooth lines of various contour lines were drawn (connecting points of equal elevation and the contour map was prepared).